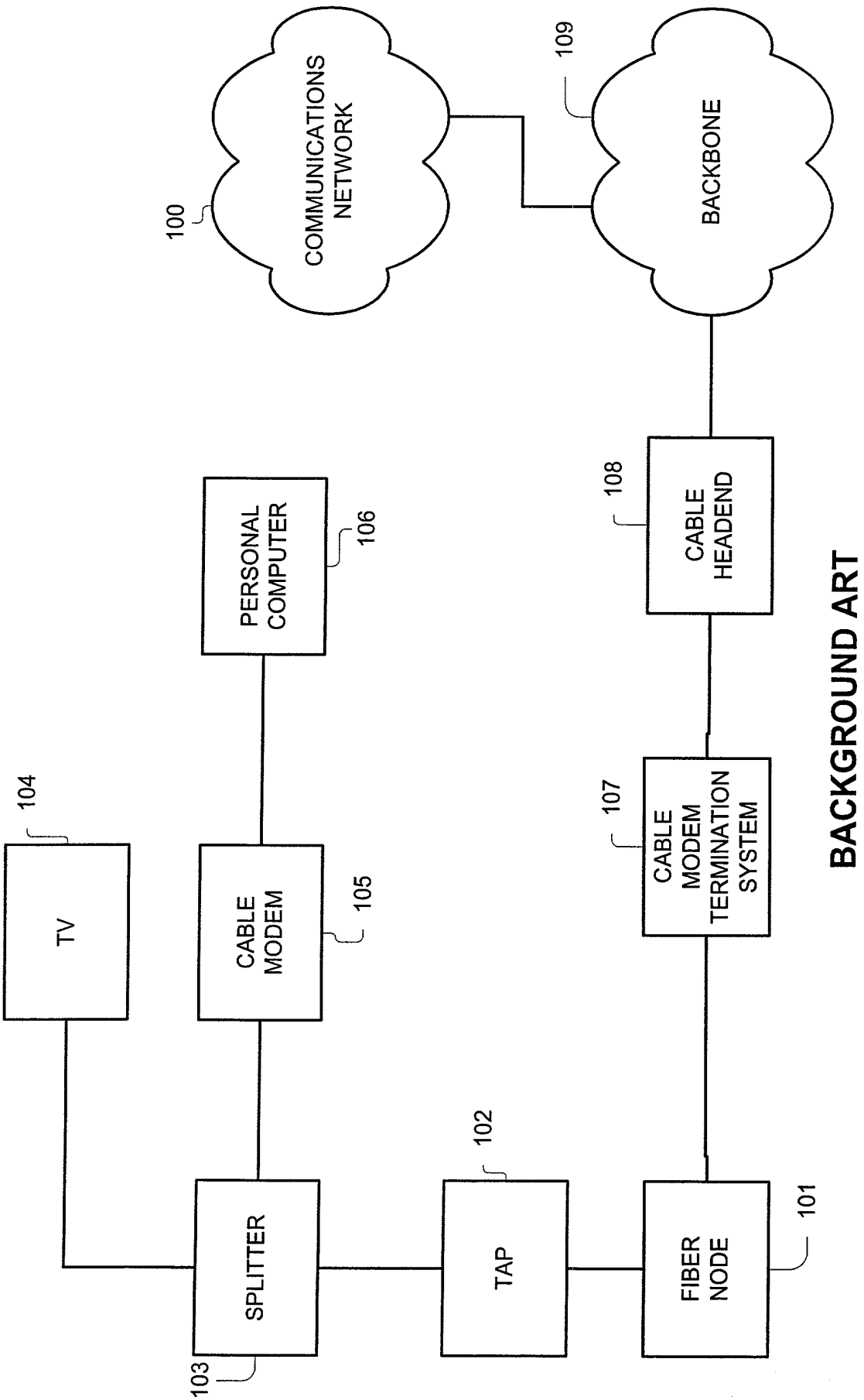
PTO/SB/08a (10-01)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

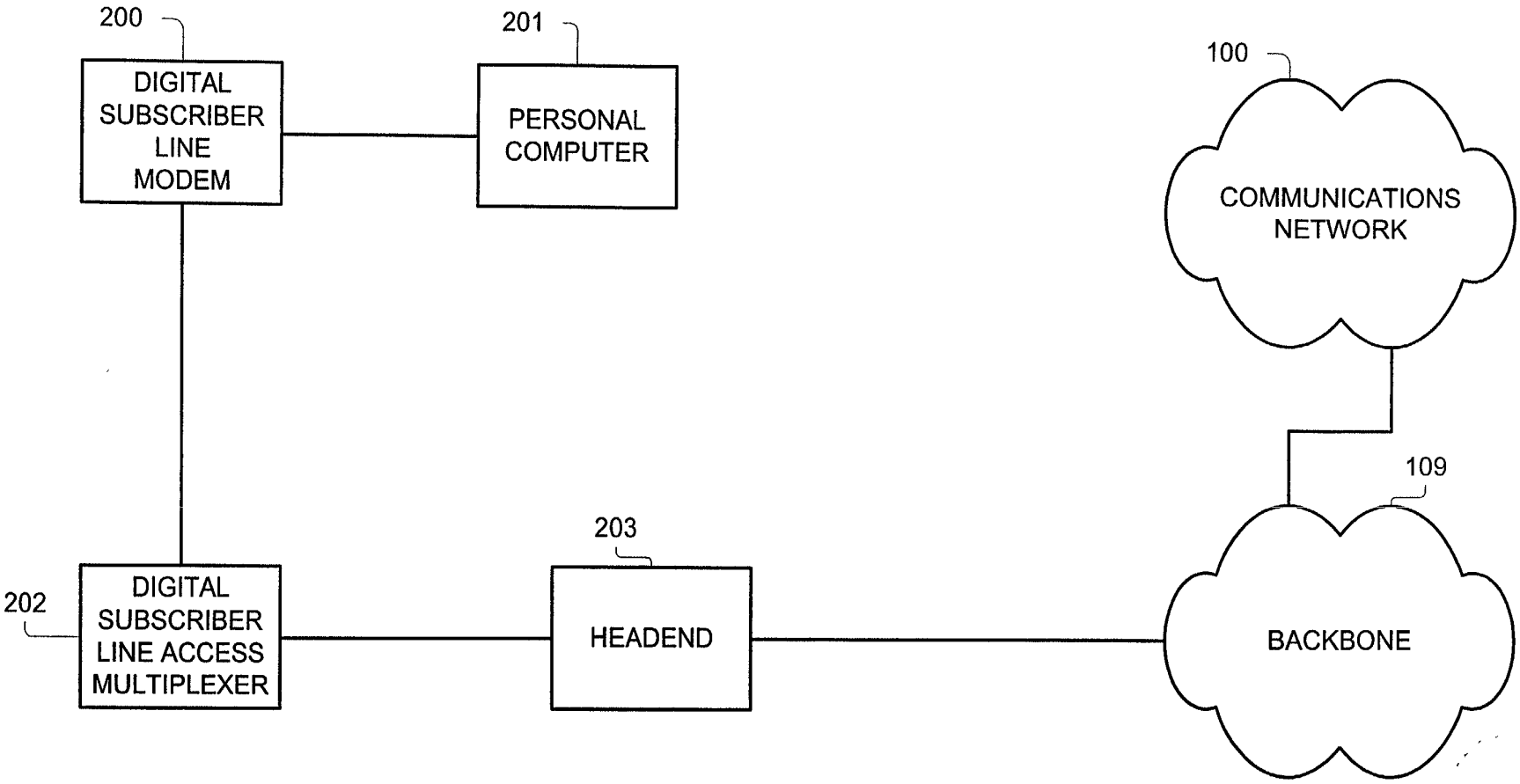
FIGURE 1




BACKGROUND ART

TOTT90"890h8Z60

# FIGURE 2




**BACKGROUND ART**

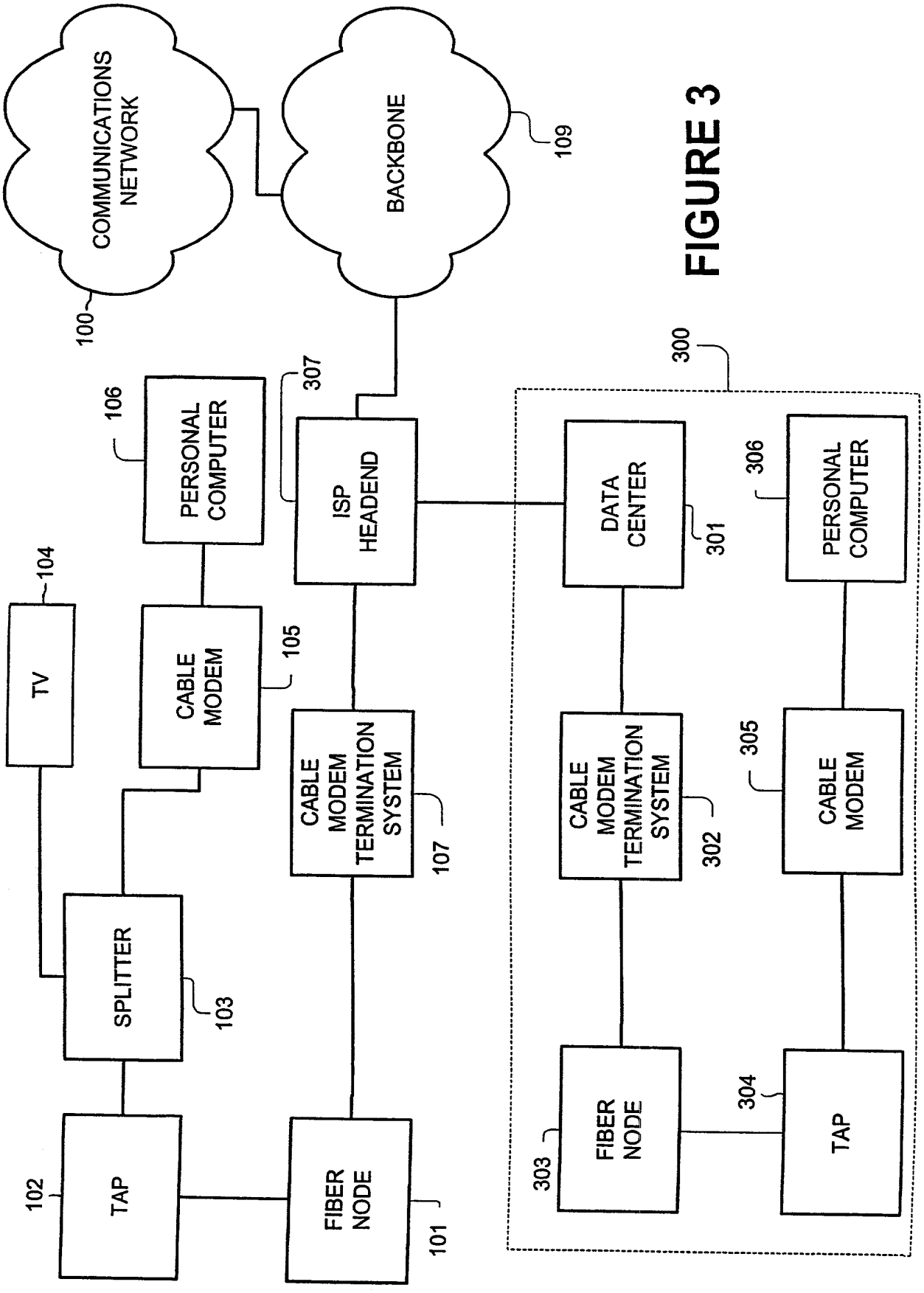

COMMUNICATIONS NETWORK
100
BACKBONE
109
300
307
106
PERSONAL COMPUTER
ISP HEADEND
DATA CENTER
306
PERSONAL COMPUTER
301
104
TV
CABLE MODEM
105
CABLE MODEM TERMINATION SYSTEM
107
CABLE MODEM TERMINATION SYSTEM
302
305
CABLE MODEM
SPLITTER
103
102
TAP
FIBER NODE
101
303
FIBER NODE
304
TAP

FIGURE 3

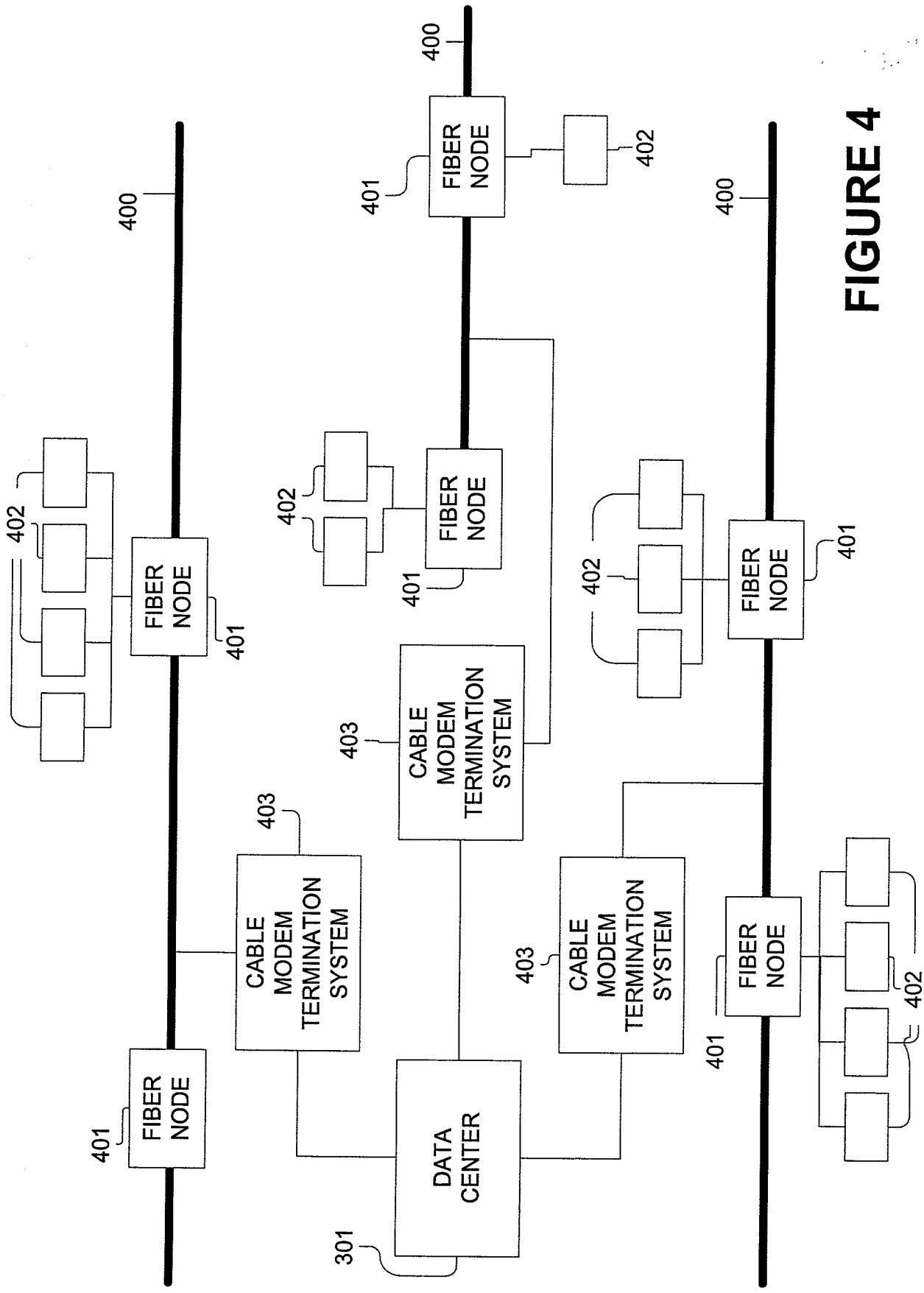

400
FIBER NODE
401
402
CABLE MODEM TERMINATION SYSTEM
403
DATA CENTER
301

FIGURE 4

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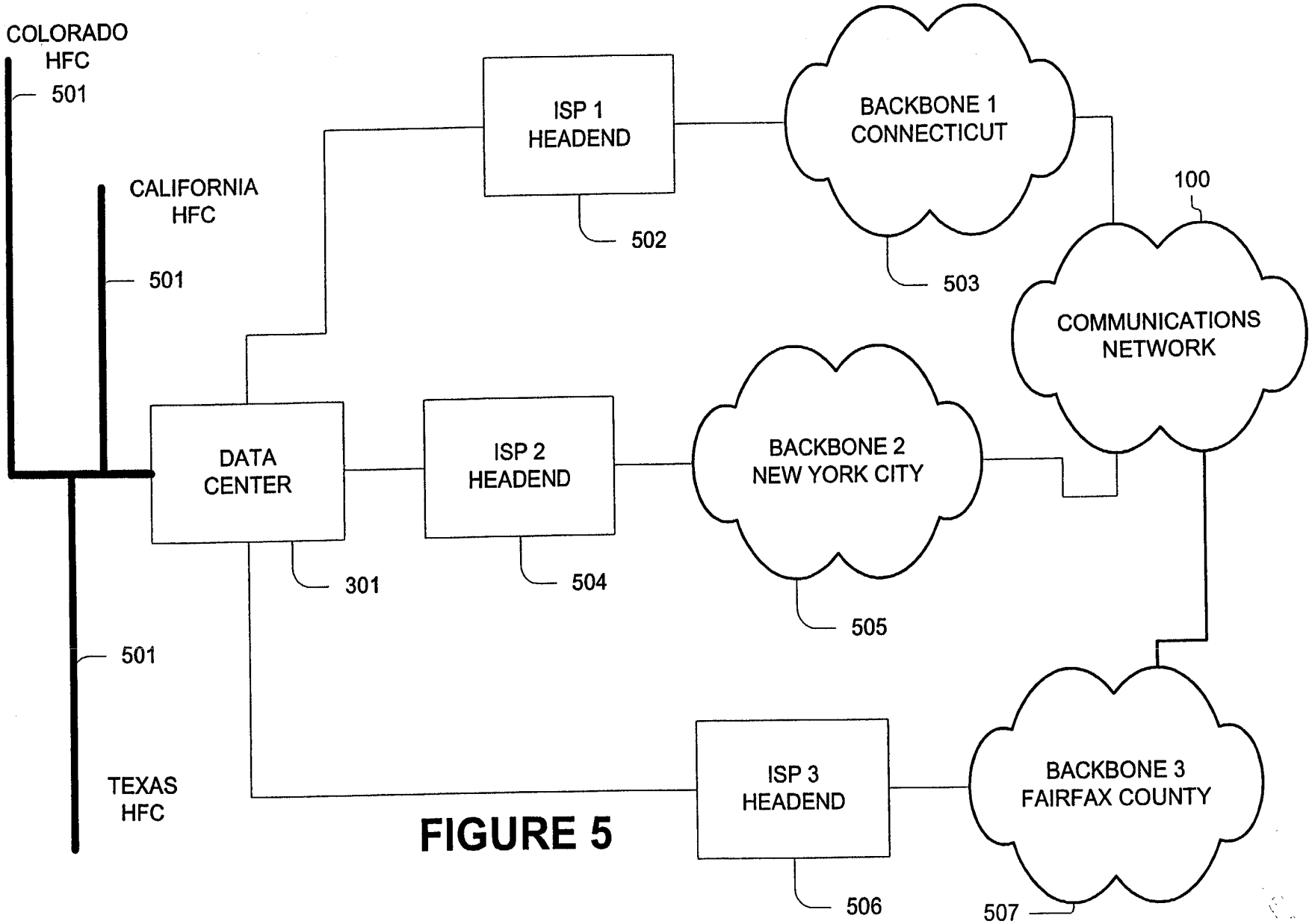


FIGURE 5

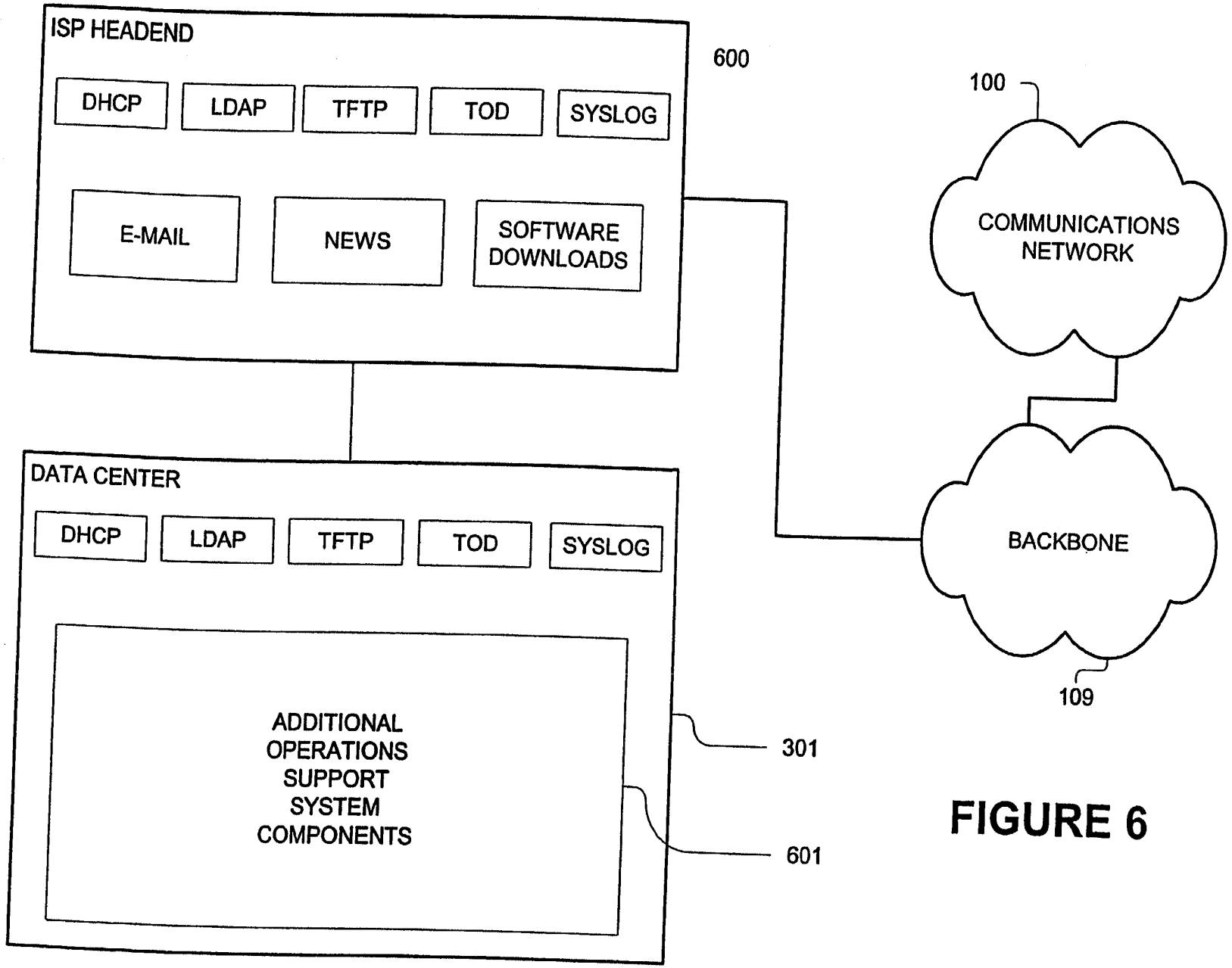
ISP HEADEND
600
DHCP
LDAP
TFTP
TOD
SYSLOG
E-MAIL
NEWS
SOFTWARE DOWNLOADS
100
COMMUNICATIONS NETWORK
BACKBONE
109
DATA CENTER
DHCP
LDAP
TFTP
TOD
SYSLOG
ADDITIONAL OPERATIONS SUPPORT SYSTEM COMPONENTS
301
601

FIGURE 6

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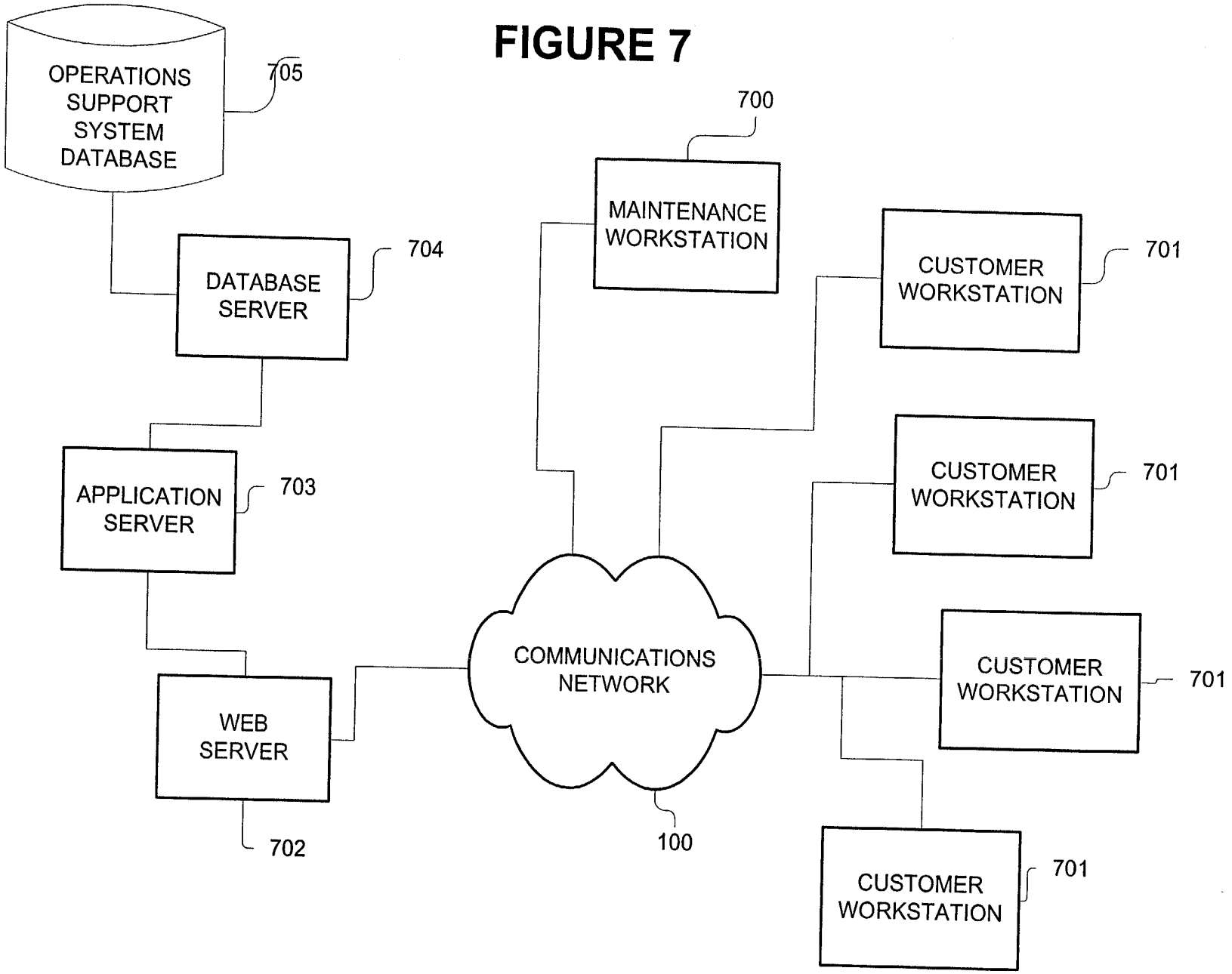
# FIGURE 7



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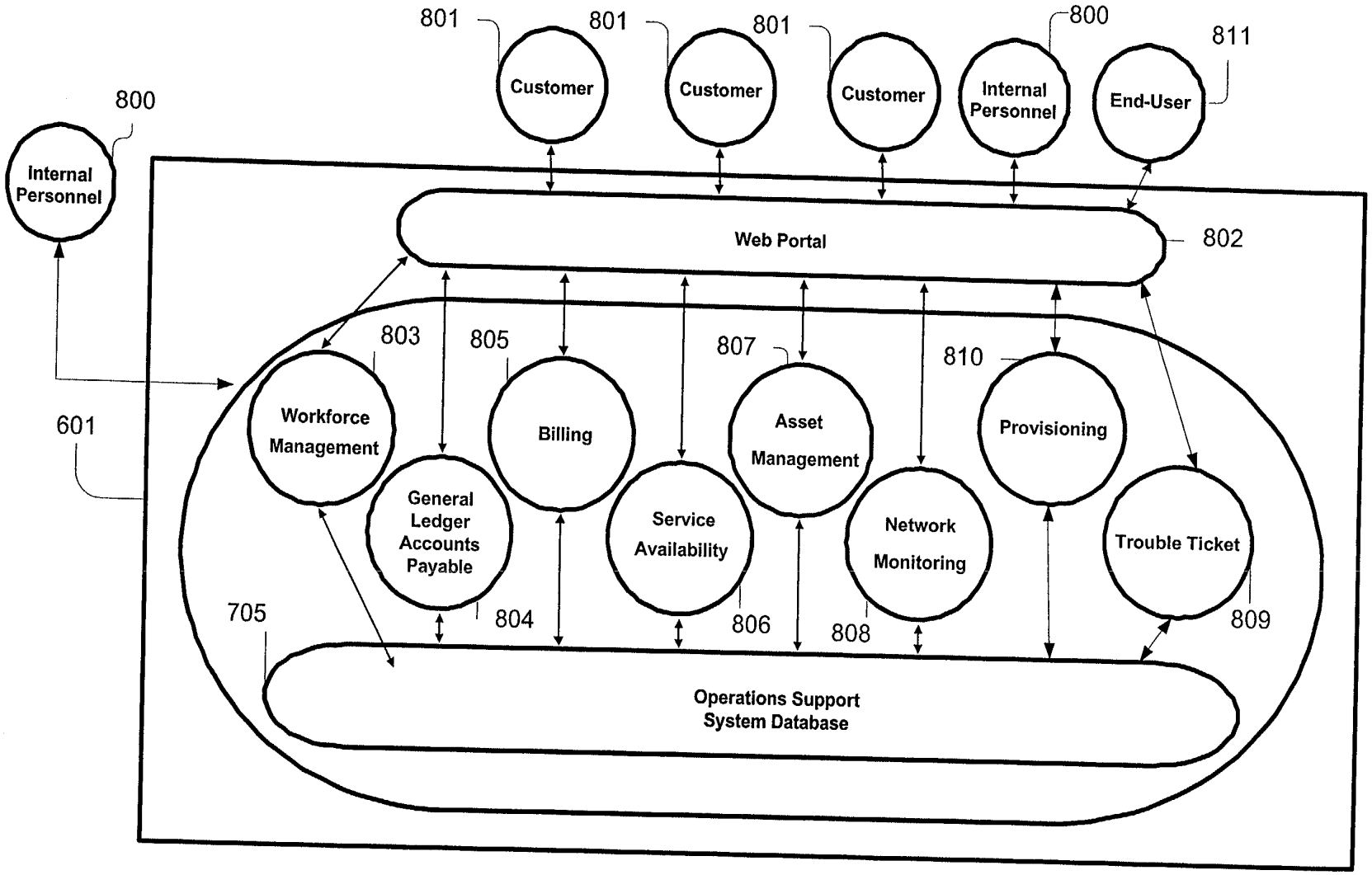
# FIGURE 8



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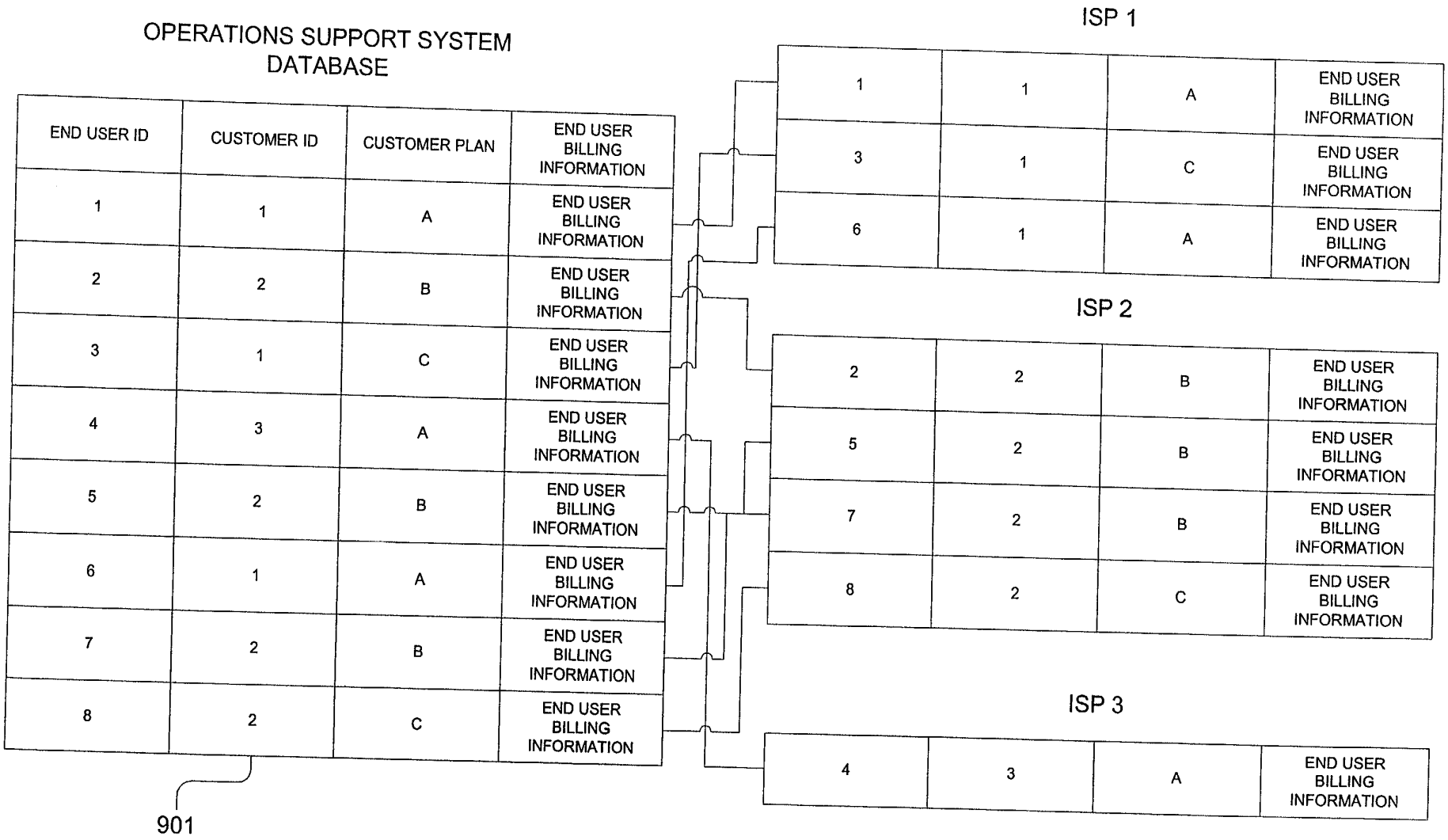
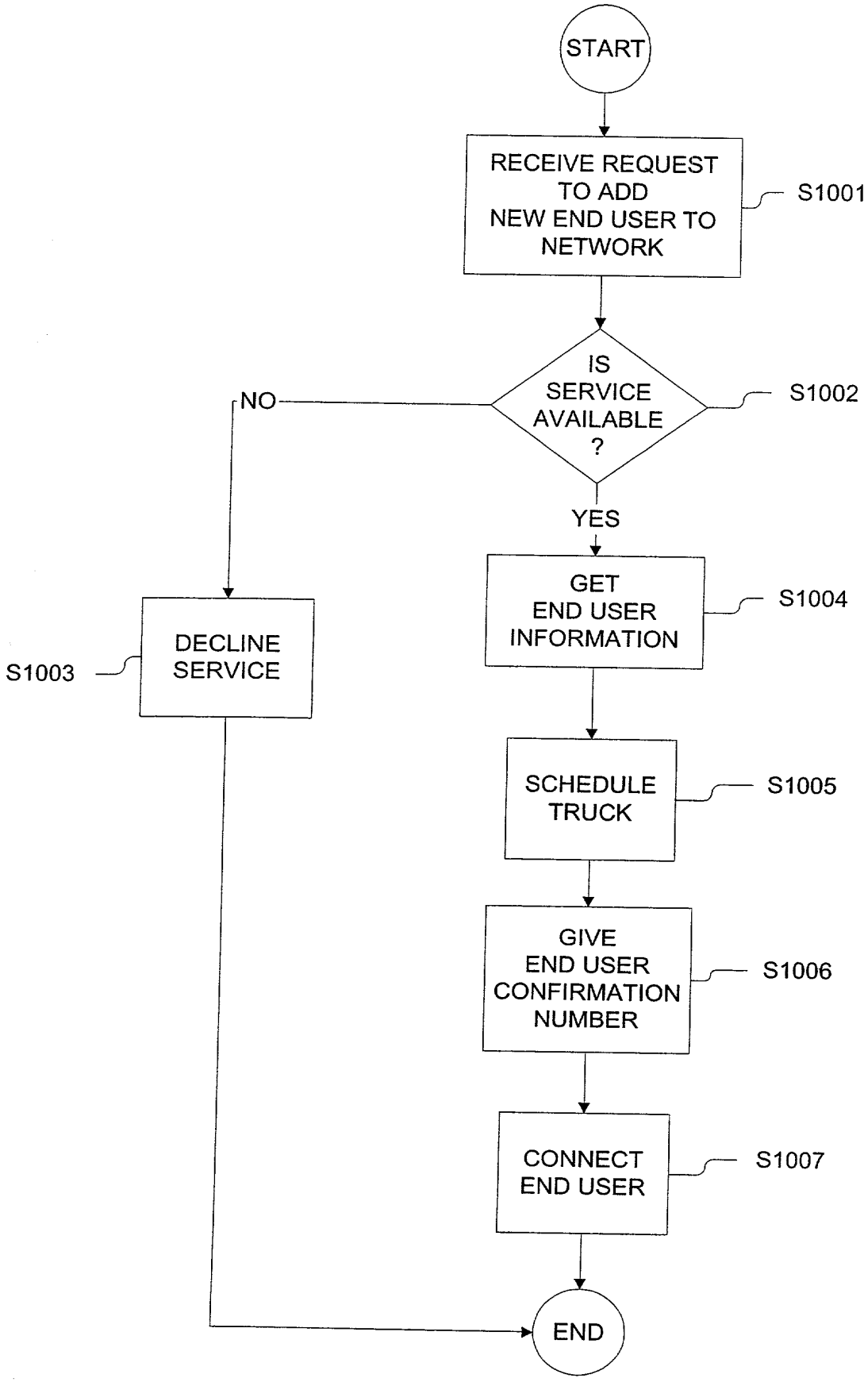
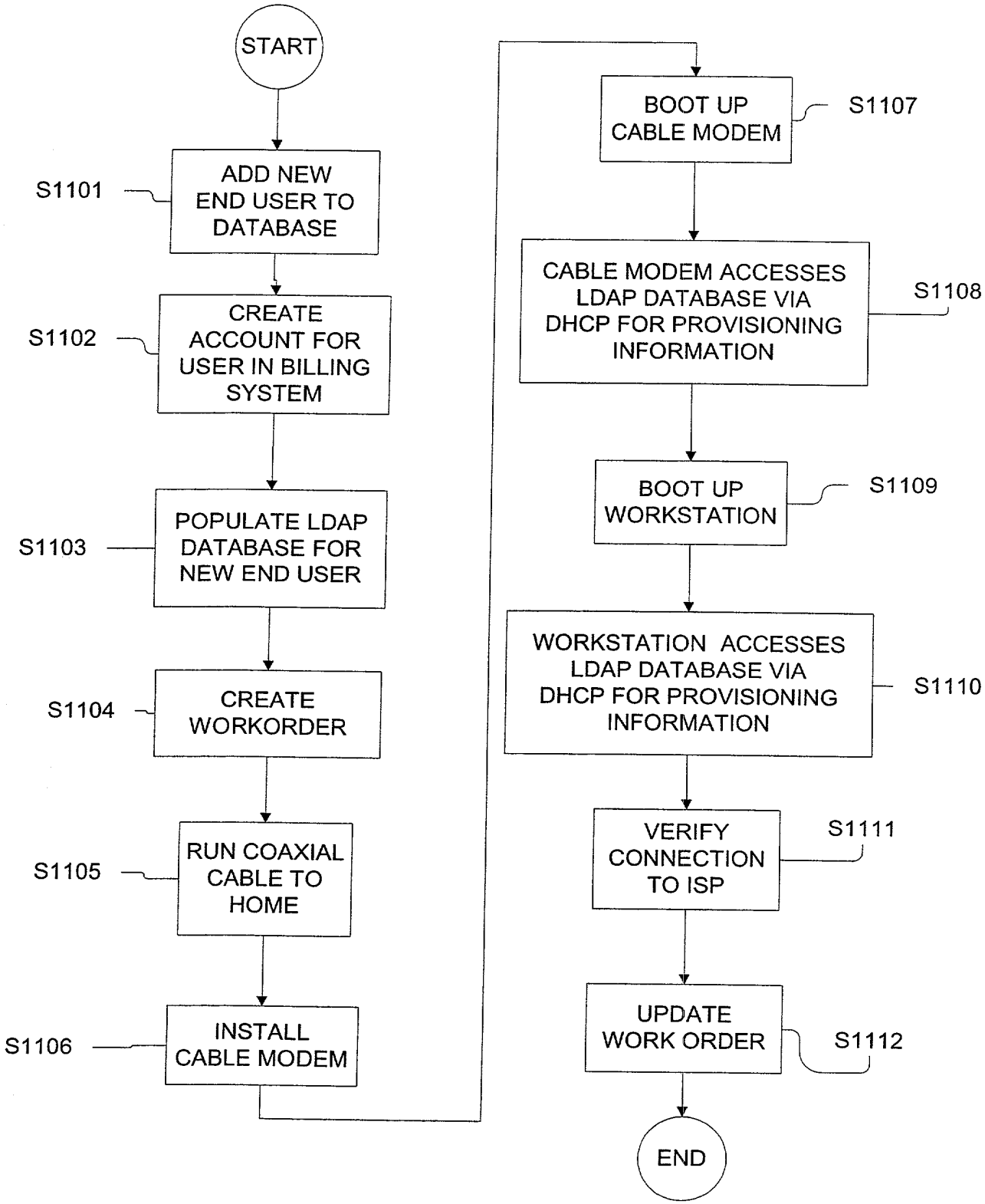
# FIGURE 9



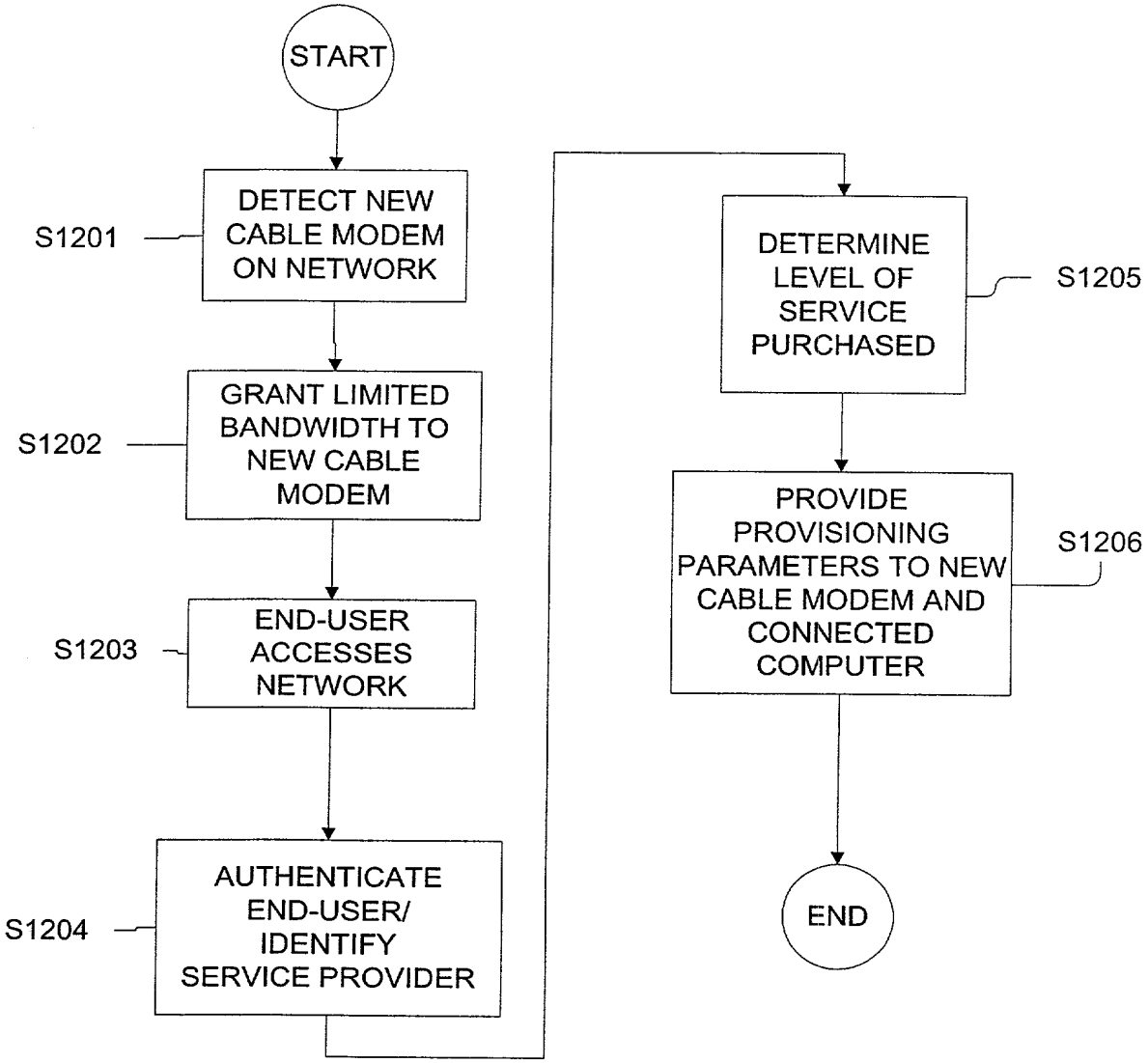
# FIGURE 10


START
RECEIVE REQUEST TO ADD NEW END USER TO NETWORK
S1001
IS SERVICE AVAILABLE ?
S1002
NO
YES
DECLINE SERVICE
S1003
GET END USER INFORMATION
S1004
SCHEDULE TRUCK
S1005
GIVE END USER CONFIRMATION NUMBER
S1006
CONNECT END USER
S1007
END

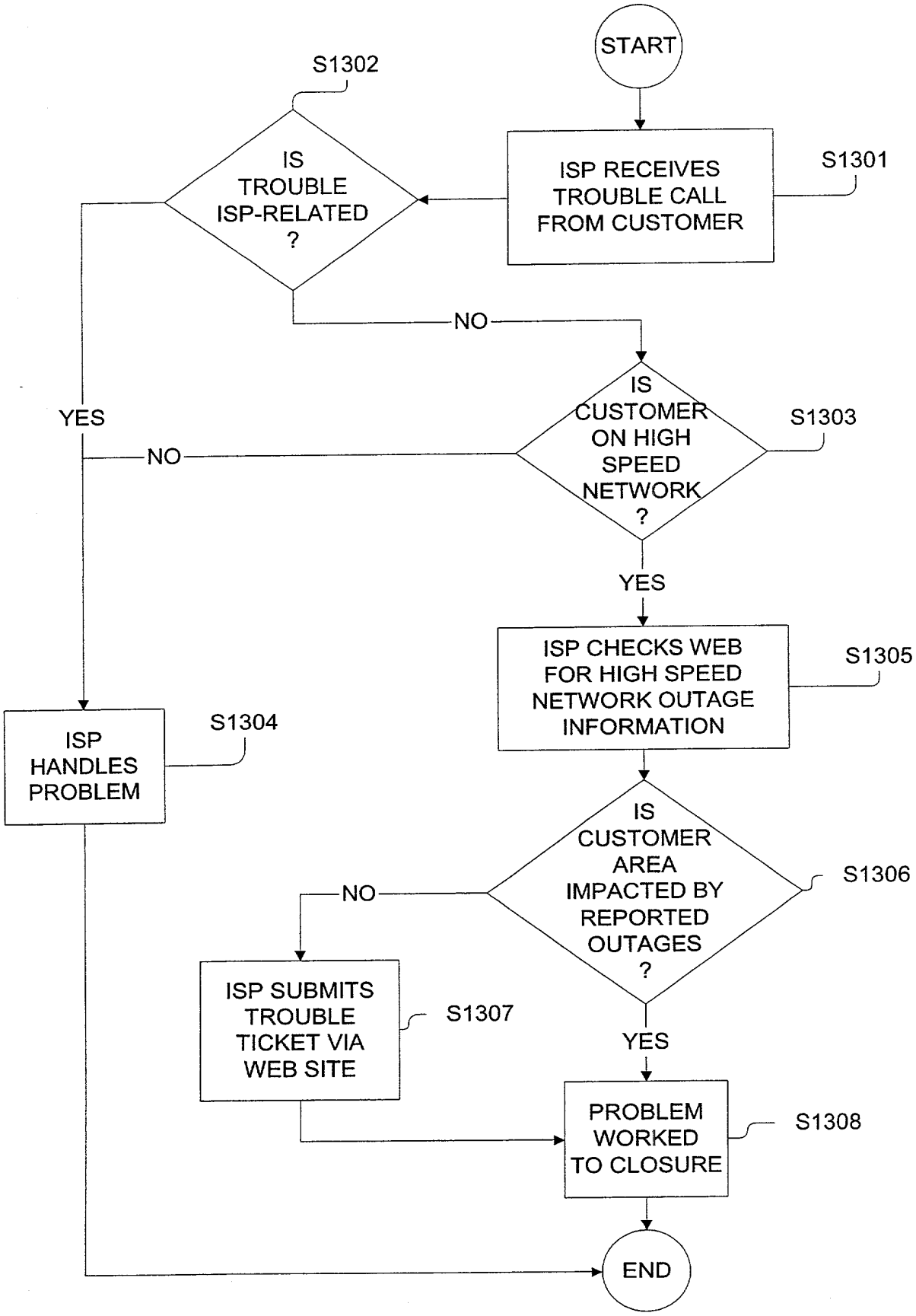
# FIGURE 11


START
S1101
ADD NEW END USER TO DATABASE
S1102
CREATE ACCOUNT FOR USER IN BILLING SYSTEM
S1103
POPULATE LDAP DATABASE FOR NEW END USER
S1104
CREATE WORKORDER
S1105
RUN COAXIAL CABLE TO HOME
S1106
INSTALL CABLE MODEM
S1107
BOOT UP CABLE MODEM
S1108
CABLE MODEM ACCESSES LDAP DATABASE VIA DHCP FOR PROVISIONING INFORMATION
S1109
BOOT UP WORKSTATION
S1110
WORKSTATION ACCESSES LDAP DATABASE VIA DHCP FOR PROVISIONING INFORMATION
S1111
VERIFY CONNECTION TO ISP
S1112
UPDATE WORK ORDER
END

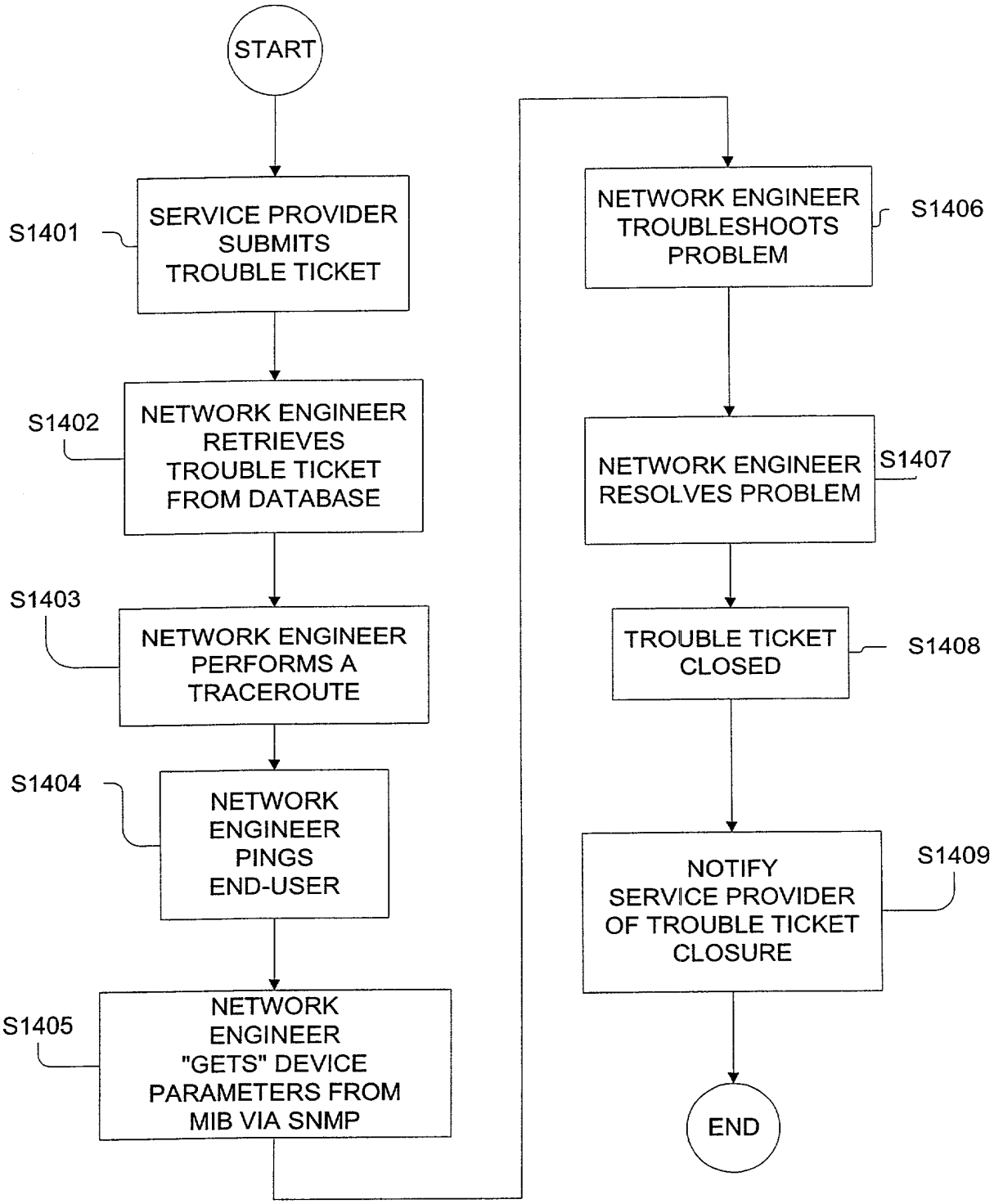
# FIGURE 12


START
S1201
DETECT NEW CABLE MODEM ON NETWORK
S1202
GRANT LIMITED BANDWIDTH TO NEW CABLE MODEM
S1203
END-USER ACCESSES NETWORK
S1204
AUTHENTICATE END-USER/ IDENTIFY SERVICE PROVIDER
S1205
DETERMINE LEVEL OF SERVICE PURCHASED
S1206
PROVIDE PROVISIONING PARAMETERS TO NEW CABLE MODEM AND CONNECTED COMPUTER
END

# FIGURE 13


START
S1301
ISP RECEIVES TROUBLE CALL FROM CUSTOMER
S1302
IS TROUBLE ISP-RELATED ?
YES
NO
S1303
IS CUSTOMER ON HIGH SPEED NETWORK ?
NO
YES
S1304
ISP HANDLES PROBLEM
S1305
ISP CHECKS WEB FOR HIGH SPEED NETWORK OUTAGE INFORMATION
S1306
IS CUSTOMER AREA IMPACTED BY REPORTED OUTAGES ?
NO
YES
S1307
ISP SUBMITS TROUBLE TICKET VIA WEB SITE
S1308
PROBLEM WORKED TO CLOSURE
END

# FIGURE 14


START
S1401
SERVICE PROVIDER SUBMITS TROUBLE TICKET
S1402
NETWORK ENGINEER RETRIEVES TROUBLE TICKET FROM DATABASE
S1403
NETWORK ENGINEER PERFORMS A TRACEROUTE
S1404
NETWORK ENGINEER PINGS END-USER
S1405
NETWORK ENGINEER "GETS" DEVICE PARAMETERS FROM MIB VIA SNMP
S1406
NETWORK ENGINEER TROUBLESHOOTS PROBLEM
S1407
NETWORK ENGINEER RESOLVES PROBLEM
S1408
TROUBLE TICKET CLOSED
S1409
NOTIFY SERVICE PROVIDER OF TROUBLE TICKET CLOSURE
END

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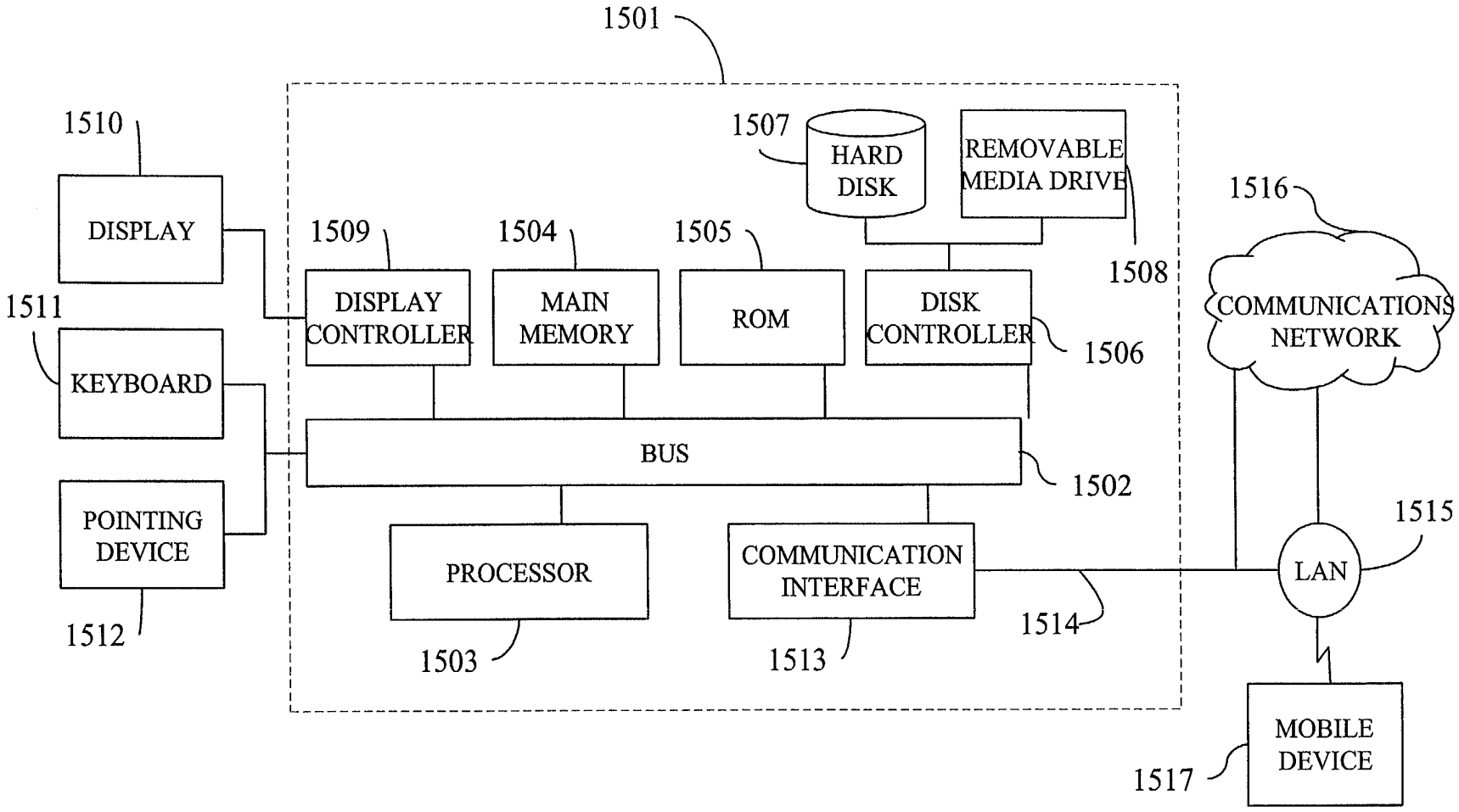
# FIGURE 15

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